

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011

Permit 278245

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address BC OPERATING, INC. P.O. Box 50820 Midland, TX 79710		2. OGRID Number 160825
		3. API Number 30-015-46739
4. Property Code 327159	5. Property Name Fadeaway Ridge 32 SB State	6. Well No. 201H

7. Surface Location

UL - Lot A	Section 32	Township 19S	Range 28E	Lot Idn A	Feet From 1216	N/S Line N	Feet From 332	E/W Line E	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot D	Section 32	Township 19S	Range 28E	Lot Idn D	Feet From 990	N/S Line N	Feet From 50	E/W Line W	County Eddy
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9. Pool Information

WINCHESTER;BONE SPRING	65010
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3364
16. Multiple N	17. Proposed Depth 12306	18. Formation 2nd Bone Spring Sand	19. Contractor	20. Spud Date 3/1/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	48	700	750	0
Int1	12.25	9.625	40	4000	900	0
Prod	8.75	7	26	6300	430	0
Prod	8.75	5.5	17	12306	1050	3000

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

Signature:

Printed Name: Electronically filed by Thomas A Wolfmueller

Title:

Email Address: twolfmueller@bcoperating.com

Date: 2/13/2020

Phone: 432-214-1985

OIL CONSERVATION DIVISION

Approved By: Raymond Podany

Title: Geologist

Approved Date: 2/13/2020 Expiration Date: 2/13/2022

Conditions of Approval Attached

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 65010	³ Pool Name WINCHESTER; BONE SPRING
⁴ Property Code	⁵ Property Name FADEAWAY RIDGE 32 SB STATE	⁶ Well Number 201H
⁷ OGRID No. 249099	⁸ Operator Name B.C. OPERATING, INC.	⁹ Elevation 3364'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	32	19S	28E		1219	NORTH	332	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	32	19S	28E		990	NORTH	50	WEST	EDDY

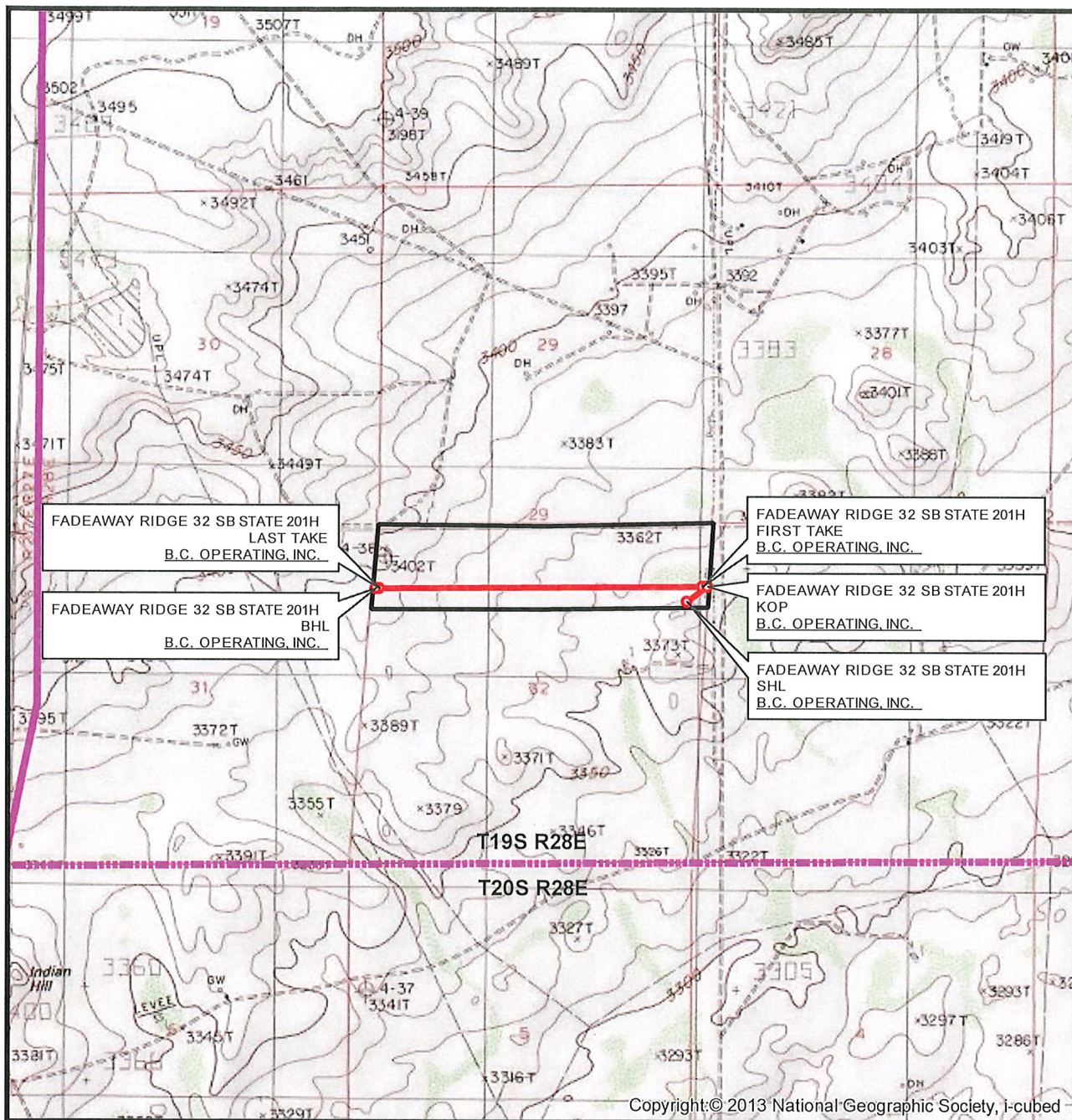
¹² Dedicated Acres 160.0	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

INFILL WELL	CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 585456.63' / Y: 589591.76' B - X: 582827.52' / Y: 589553.68' C - X: 580205.38' / Y: 589555.59' D - X: 580314.87' / Y: 590871.14' E - X: 582920.93' / Y: 590848.98' F - X: 585541.30' / Y: 590906.81'	CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 544276.65' / Y: 589530.04' B - X: 541647.55' / Y: 589491.98' C - X: 539025.41' / Y: 589493.92' D - X: 539134.93' / Y: 590809.43' E - X: 541740.98' / Y: 590787.26' F - X: 544361.34' / Y: 590845.07'	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date _____ Printed Name _____ E-mail Address _____
	SURFACE HOLE LOCATION 1219' FNL 332' FEL, SECTION 32 NAD 83, SPCS NM EAST X: 585129.07' / Y: 589678.40' LAT: 32.62099584N / LON: 104.19109783W NAD 27, SPCS NM EAST X: 543949.09' / Y: 589616.68' LAT: 32.62087891N / LON: 104.19058947W		
	KICK OFF POINT 990' FNL 25' FEL, SECTION 32 NAD 83, SPCS NM EAST X: 585452.37' / Y: 589914.61' LAT: 32.62164393N / LON: 104.19004673W NAD 27, SPCS NM EAST X: 544272.39' / Y: 589852.89' LAT: 32.62152700N / LON: 104.18953838W		
	FIRST TAKE POINT 990' FNL 100' FEL, SECTION 32 NAD 83, SPCS NM EAST X: 585377.10' / Y: 589912.95' LAT: 32.62163964N / LON: 104.19029119W NAD 27, SPCS NM EAST X: 544197.13' / Y: 589851.23' LAT: 32.62152272N / LON: 104.18978283W		
LAST TAKE POINT 990' FNL 100' FWL, SECTION 32 NAD 83, SPCS NM EAST X: 580332.80' / Y: 589880.95' LAT: 32.62156927N / LON: 104.20667534W NAD 27, SPCS NM EAST X: 539152.84' / Y: 589819.27' LAT: 32.62145252N / LON: 104.20616658W		¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. FEBRUARY 12, 2020 Date of Survey Signature and Seal of Professional Surveyor: Certificate Number LLOYD P. SHORT 21653	
BOTTOM HOLE LOCATION 990' FNL 50' FWL, SECTION 32 NAD 83, SPCS NM EAST X: 580282.67' / Y: 589881.38' LAT: 32.62157061N / LON: 104.20683818W NAD 27, SPCS NM EAST X: 539102.70' / Y: 589819.69' LAT: 32.62145386N / LON: 104.20632942W			

Distances/areas relative to NAD 83 Combined Scale Factor: 0.99974806 Convergence Angle: 00°04'09.18998"

LOCATION VERIFICATION MAP



SEC. 32 TWP. 19-S RGE. 28-E
 SURVEY: N.M.P.M.
 COUNTY: EDDY
 OPERATOR: B.C. OPERATING, INC.
 DESCRIPTION: 1219' FNL & 332' FEL
 ELEVATION: 3364'
 LEASE: FADEAWAY RIDGE 32 STATE
 U.S.G.S. TOPOGRAPHIC MAP: ANGEL DRAW, NM.

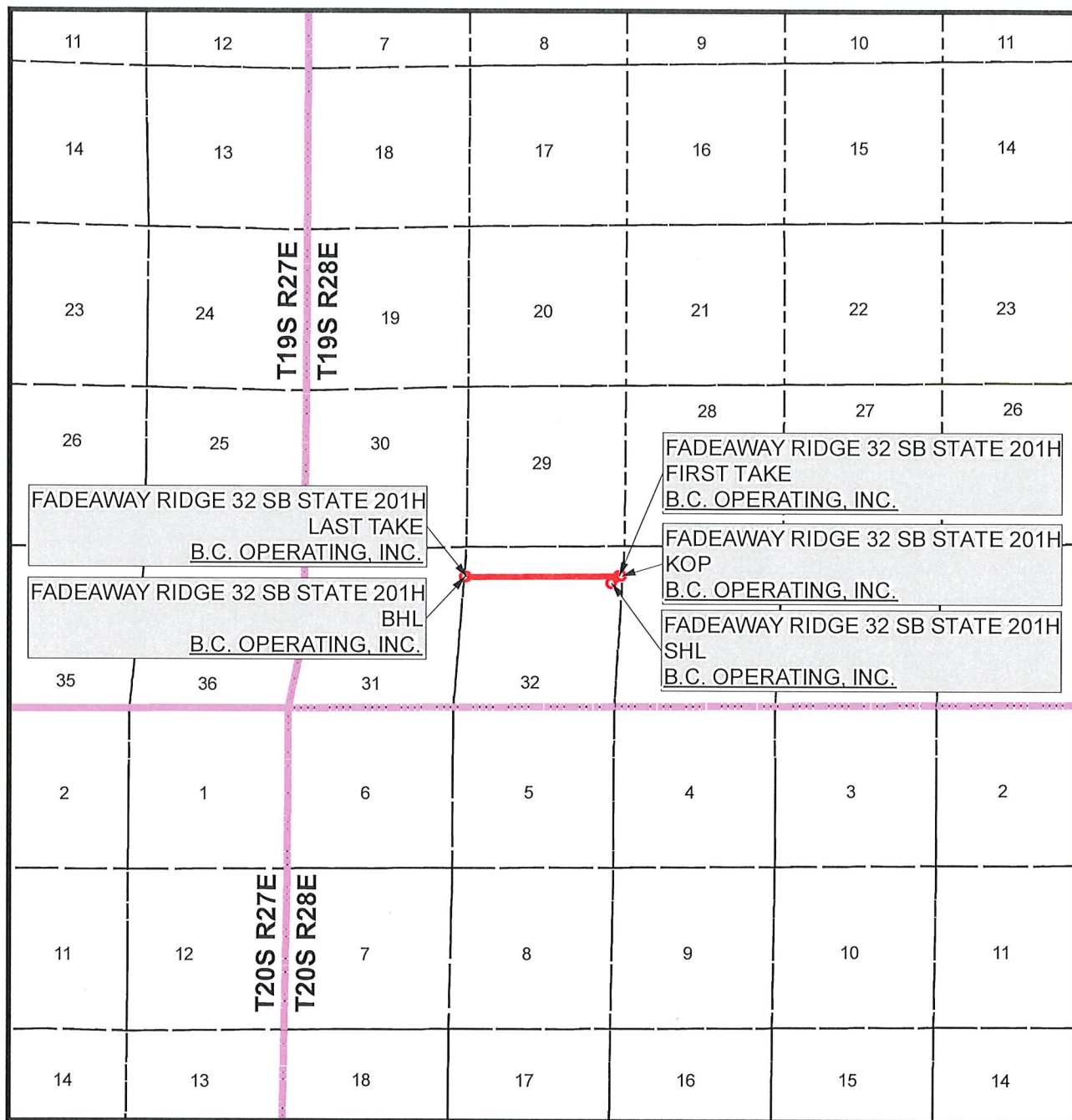
1" = 2,500'
 CONTOUR INTERVAL = 10'



SHEET 2 OF 3

PREPARED BY:
 R-SQUARED GLOBAL, LLC
 1309 LOUISVILLE AVENUE, MONROE, LA 71201
 318-323-6900 OFFICE
 JOB No. R4037_001_A

VICINITY MAP



SEC. 32 TWP. 19-S RGE. 28-E
 SURVEY: N.M.P.M.
 COUNTY: EDDY
 OPERATOR: B.C. OPERATING, INC.
 DESCRIPTION: 1219' FNL & 332' FEL
 ELEVATION: 3364'
 LEASE: FADEAWAY RIDGE 32 STATE
 U.S.G.S. TOPOGRAPHIC MAP: ANGEL DRAW, NM.

1" = 1 MILE



SHEET 3 OF 3

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 R-SQUARED GLOBAL, LLC
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Oil Conservation Division
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GAS CAPTURE PLAN

Date: 2/13/2020

☒ Original

Operator & OGRID No.: [160825] BC OPERATING, INC.

☐ Amended - Reason for
Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Fadeaway Ridge 32 SB State #201H	30-015-46739	A-32-19S-28E	1216N 0332E	10	Flared	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to FRONTIER FIELD SERVICES, LLC and will be connected to FRONTIER FIELD SERVICES, LLC Low Pressure gathering system located in Eddy County, New Mexico. It will require 2000' of pipeline to connect the facility to Low Pressure gathering system. BC OPERATING, INC. provides (periodically) to FRONTIER FIELD SERVICES, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, BC OPERATING, INC. and FRONTIER FIELD SERVICES, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at FRONTIER FIELD SERVICES, LLC Processing Plant located in Sec. 03, Twn. 18S, Rng. 27E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on FRONTIER FIELD SERVICES, LLC system at that time. Based on current information, it is BC OPERATING, INC.'s belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Comments

Permit 278245

PERMIT COMMENTS

Operator Name and Address: BC OPERATING, INC. [160825] P.O. Box 50820 Midland, TX 79710		API Number: 30-015-46739
		Well: Fadeaway Ridge 32 SB State #201H
Created By	Comment	Comment Date

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Santa Fe, NM 87505

Form APD Conditions

Permit 278245

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: BC OPERATING, INC. [160825] P.O. Box 50820 Midland, TX 79710		API Number: 30-015-46739
		Well: Fadeaway Ridge 32 SB State #201H
OCD Reviewer	Condition	
ksimmons	Cement is required to circulate on both surface and intermediate1 strings of casing	
ksimmons	Will require a directional survey with the C-104	

Hydrogen Sulfide Drilling Operations Plan

BC Operating, Inc.

Fadeaway Ridge 32 SB State 201H

SHL: 1219' FNL & 332' FEL, Section 32

BHL: 990' FNL & 50' FWL, Section 32

T19S-R28E

Eddy County, New Mexico

1. H2S Detection and Alarm Systems
 - A. H2S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.
2. Windsock and/or wind streamers
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock at briefing area should be high enough to be visible.
3. Condition Flags and Signs
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency personnel admitted to location.
4. Well control equipment
 - A. See "Pressure Control Equipment"
5. Communication
 - A. While working under masks chalkboards will be used for communication.
 - B. Hand signals will be used where chalk board is inappropriate.
 - C. Two-way radio will be used to communicate off location in case emergency help is required.
In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
6. Drillstem testing is not anticipated.
7. Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
8. If H2S is encountered, mud system will be altered if necessary, to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

BC Operating, Inc.
Fadeaway Ridge 32 SB State 201H
SHL: 1219' FNL & 332' FEL, Section 32
BHL: 990' FNL & 50' FWL, Section 32
T19S-R28E
Eddy County, New Mexico

Emergency Contact list

BC Operating, Inc.	432-684-9696
Thomas Wolfmueller	432-214-1985
Jason Wacker	432-631-2142
Bruce Madden	432-894-0721

EMERGENCY RESPONSE NUMBERS

State Police	575-748-9718
State Police Lea Co.	575-392-5588
Eddy County Sheriff	575-746-2701
Lea County Sheriff	575-396-3611
Emergency Medical Services	911 or 575-746-2701
Artesia Fire and Ambulance	575-746-5050
Maljamar Fire and Ambulance	575-674-4100
Artesia General Hospital	575-748-3333
702 N. 13th St. Artesia	
Carlsbad Medical Center	575-887-4100
2430 West Pierce Street	
Lea County Emergency Response	575-396-8602
Lea County Ambulance Eunice	911 or 575-396-8602
Carlsbad Police Department	575-885-2111
Eddy County Emergency Management	575-887-9511
Carlsbad Fire Department	575-885-3125

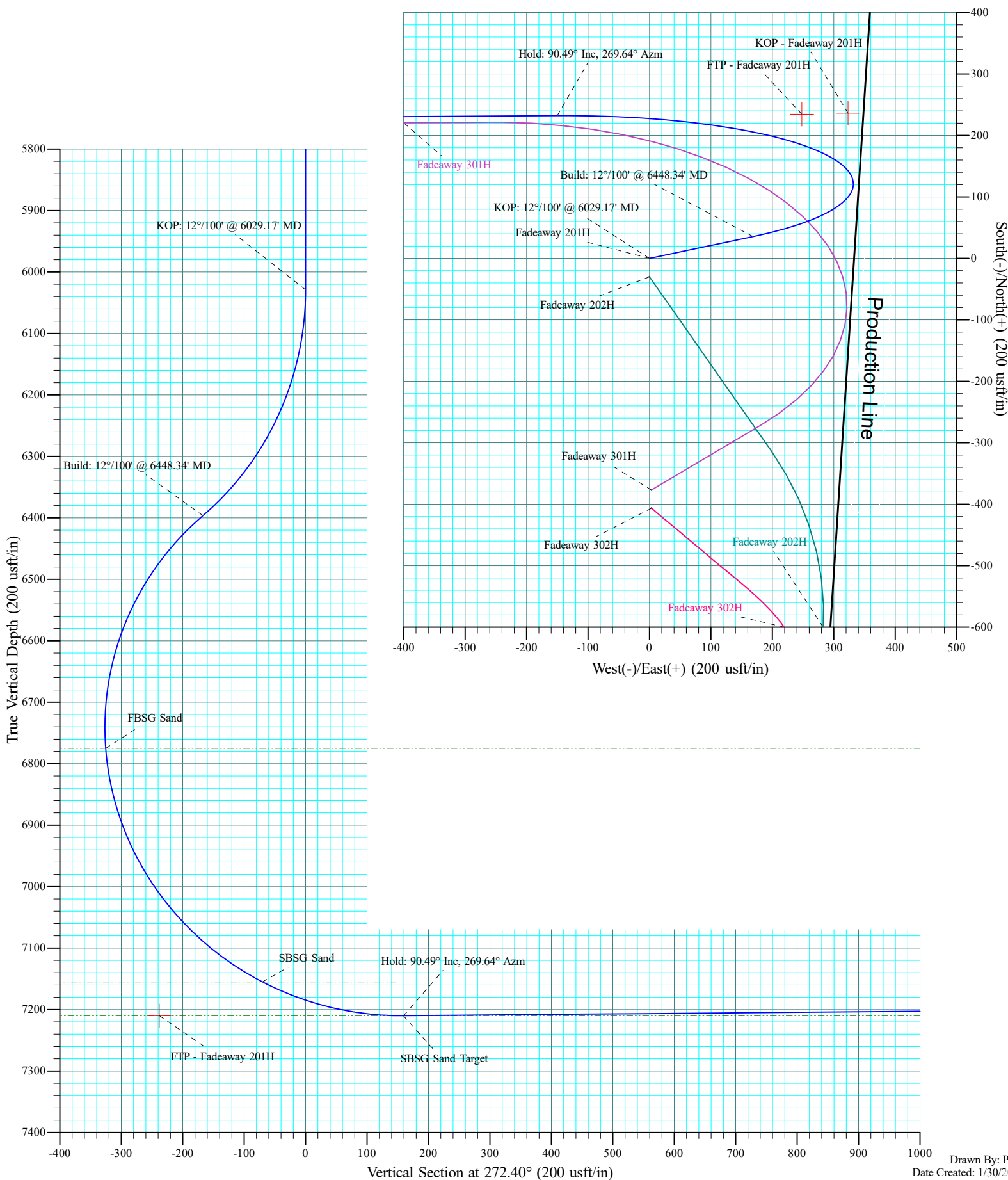
Fadeaway Ridge 32 SB State 201H

Eddy Co., NM (NAD 83 NME)

Job No. WT-20-***

Rig - N/A

Lateral 1r0





Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 201H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3384.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 201H	MD Reference:	Well @ 3384.00usft (Est. 20'KB)
Well:	Fadeaway 201H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Project	Eddy Co., NM (NAD 83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Fadeaway Ridge 32 SB State 201H		
Site Position:		Northing:	589,678.40 usft
From:	Map	Easting:	585,129.07 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 37' 15.585 N
		Longitude:	104° 11' 27.952 W
		Grid Convergence:	0.08 °

Well	Fadeaway 201H		
Well Position	+N/-S	0.00 usft	Northing: 589,678.40 usft
	+E/-W	0.00 usft	Easting: 585,129.07 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 37' 15.585 N
		Longitude:	104° 11' 27.952 W
		Ground Level:	3,364.00 usft

Wellbore	Planning		
Magnetics	Model Name	Sample Date	Declination (°)
	MVHD	1/30/2020	7.18
			Dip Angle (°) 60.33
			Field Strength (nT) 47,909.749

Design	Lateral 1r0		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°) 272.40

Survey Tool Program	Date	1/30/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	12,306.51	Lateral 1r0 (Planning)	MWD+HRGM	OWSG MWD + HRGM

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.000	0.000	0.000
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.000	0.000	0.000
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.000	0.000	0.000
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.000	0.000	0.000
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.000	0.000	0.000
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.000	0.000	0.000
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.000	0.000	0.000
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.000	0.000	0.000
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.000	0.000	0.000



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Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 201H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3384.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 201H	MD Reference:	Well @ 3384.00usft (Est. 20'KB)
Well:	Fadeaway 201H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.000	0.000	0.000
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.000	0.000	0.000
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.000	0.000	0.000
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.000	0.000	0.000
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.000	0.000	0.000
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.000	0.000	0.000
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.000	0.000	0.000
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.000	0.000	0.000
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.000	0.000	0.000
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.000	0.000	0.000
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.000	0.000	0.000
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.000	0.000	0.000
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.000	0.000	0.000
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.000	0.000	0.000
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.000	0.000	0.000
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.000	0.000	0.000
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.000	0.000	0.000
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.000	0.000	0.000
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.000	0.000	0.000
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.000	0.000	0.000
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.000	0.000	0.000
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.000	0.000	0.000
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.000	0.000	0.000
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.000	0.000	0.000
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.000	0.000	0.000
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.000	0.000	0.000
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.000	0.000	0.000
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.000	0.000	0.000
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.000	0.000	0.000
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.000	0.000	0.000
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.000	0.000	0.000
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.000	0.000	0.000
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.000	0.000	0.000
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.000	0.000	0.000
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.000	0.000	0.000
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.000	0.000	0.000
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.000	0.000	0.000
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.000	0.000	0.000
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.000	0.000	0.000
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.000	0.000	0.000
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.000	0.000	0.000
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.000	0.000	0.000
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.000	0.000	0.000
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.000	0.000	0.000



Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 201H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3384.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 201H	MD Reference:	Well @ 3384.00usft (Est. 20'KB)
Well:	Fadeaway 201H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.000	0.000	0.000
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.000	0.000	0.000
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.000	0.000	0.000
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.000	0.000	0.000
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.000	0.000	0.000
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.000	0.000	0.000
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.000	0.000	0.000
6,029.17	0.00	0.00	6,029.17	0.00	0.00	0.00	0.000	0.000	0.000
KOP: 12°/100' @ 6029.17' MD									
6,050.00	2.50	78.10	6,049.99	0.09	0.44	-0.44	12.000	12.000	0.000
6,075.00	5.50	78.10	6,074.93	0.45	2.15	-2.13	12.000	12.000	0.000
6,100.00	8.50	78.10	6,099.74	1.08	5.13	-5.08	12.000	12.000	0.000
6,125.00	11.50	78.10	6,124.36	1.98	9.38	-9.29	12.000	12.000	0.000
6,150.00	14.50	78.10	6,148.71	3.14	14.88	-14.74	12.000	12.000	0.000
6,175.00	17.50	78.10	6,172.74	4.56	21.62	-21.41	12.000	12.000	0.000
6,200.00	20.50	78.10	6,196.38	6.23	29.59	-29.30	12.000	12.000	0.000
6,225.00	23.50	78.10	6,219.56	8.17	38.75	-38.37	12.000	12.000	0.000
6,250.00	26.50	78.10	6,242.21	10.34	49.09	-48.61	12.000	12.000	0.000
6,275.00	29.50	78.10	6,264.28	12.76	60.57	-59.98	12.000	12.000	0.000
6,300.00	32.50	78.10	6,285.71	15.42	73.17	-72.46	12.000	12.000	0.000
6,325.00	35.50	78.10	6,306.43	18.30	86.84	-86.00	12.000	12.000	0.000
6,350.00	38.50	78.10	6,326.40	21.40	101.56	-100.58	12.000	12.000	0.000
6,375.00	41.50	78.10	6,345.55	24.72	117.29	-116.15	12.000	12.000	0.000
6,400.00	44.50	78.10	6,363.83	28.23	133.97	-132.67	12.000	12.000	0.000
6,425.00	47.50	78.10	6,381.19	31.94	151.56	-150.09	12.000	12.000	0.000
6,448.34	50.30	78.10	6,396.53	35.57	168.77	-167.13	12.000	12.000	0.000
Build: 12°/100' @ 6448.34' MD									
6,450.00	50.11	78.02	6,397.60	35.83	170.02	-168.37	12.000	-11.417	-4.808
6,475.00	47.26	76.76	6,414.10	39.92	188.34	-186.51	12.000	-11.389	-5.035
6,500.00	44.43	75.38	6,431.51	44.24	205.75	-203.72	12.000	-11.328	-5.519
6,525.00	41.62	73.86	6,449.79	48.75	222.20	-219.96	12.000	-11.255	-6.103
6,550.00	38.83	72.15	6,468.88	53.47	237.63	-235.19	12.000	-11.165	-6.815
6,575.00	36.06	70.23	6,488.72	58.36	252.02	-249.36	12.000	-11.053	-7.689
6,600.00	33.33	68.04	6,509.28	63.42	265.32	-262.43	12.000	-10.913	-8.773
6,625.00	30.65	65.50	6,530.48	68.63	277.49	-274.38	12.000	-10.735	-10.131
6,650.00	28.02	62.54	6,552.27	73.98	288.50	-285.16	12.000	-10.505	-11.851
6,675.00	25.47	59.03	6,574.59	79.46	298.33	-294.74	12.000	-10.203	-14.050
6,700.00	23.02	54.81	6,597.39	85.04	306.94	-303.11	12.000	-9.801	-16.883
6,725.00	20.71	49.67	6,620.59	90.72	314.30	-310.23	12.000	-9.255	-20.542
6,750.00	18.58	43.37	6,644.14	96.48	320.41	-316.09	12.000	-8.504	-25.228
6,775.00	16.72	35.60	6,667.96	102.30	325.24	-320.67	12.000	-7.466	-31.047
6,800.00	15.21	26.16	6,692.00	108.17	328.78	-323.96	12.000	-6.044	-37.779
6,825.00	14.16	15.04	6,716.19	114.07	331.02	-325.95	12.000	-4.165	-44.486



Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 201H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3384.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 201H	MD Reference:	Well @ 3384.00usft (Est. 20'KB)
Well:	Fadeaway 201H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,850.00	13.70	2.70	6,740.46	119.98	331.95	-326.64	12.000	-1.856	-49.335
6,875.00	13.87	350.11	6,764.75	125.89	331.58	-326.02	12.000	0.686	-50.371
6,900.00	14.66	338.34	6,788.98	131.78	329.89	-324.09	12.000	3.139	-47.102
6,925.00	15.96	328.09	6,813.10	137.64	326.91	-320.86	12.000	5.230	-40.989
6,950.00	17.68	319.56	6,837.03	143.45	322.63	-316.34	12.000	6.859	-34.095
6,975.00	19.70	312.62	6,860.71	149.19	317.06	-310.54	12.000	8.064	-27.791
7,000.00	21.93	306.97	6,884.08	154.86	310.23	-303.48	12.000	8.936	-22.580
7,025.00	24.32	302.35	6,907.07	160.42	302.15	-295.18	12.000	9.568	-18.467
7,050.00	26.83	298.54	6,929.62	165.87	292.84	-285.65	12.000	10.031	-15.275
7,075.00	29.42	295.33	6,951.67	171.19	282.33	-274.93	12.000	10.375	-12.804
7,100.00	32.08	292.62	6,973.16	176.38	270.65	-263.04	12.000	10.636	-10.878
7,125.00	34.79	290.27	6,994.02	181.40	257.83	-250.02	12.000	10.836	-9.365
7,150.00	37.54	288.23	7,014.20	186.26	243.90	-235.90	12.000	10.992	-8.163
7,175.00	40.32	286.43	7,033.65	190.93	228.91	-220.72	12.000	11.116	-7.198
7,200.00	43.12	284.83	7,052.30	195.41	212.89	-204.53	12.000	11.215	-6.416
7,225.00	45.95	283.39	7,070.12	199.67	195.89	-187.36	12.000	11.296	-5.776
7,250.00	48.79	282.07	7,087.06	203.72	177.95	-169.27	12.000	11.362	-5.249
7,275.00	51.64	280.87	7,103.05	207.54	159.12	-150.30	12.000	11.417	-4.810
7,300.00	54.51	279.76	7,118.07	211.11	139.46	-130.51	12.000	11.462	-4.445
7,325.00	57.38	278.73	7,132.07	214.43	119.02	-109.94	12.000	11.500	-4.138
7,350.00	60.26	277.76	7,145.01	217.50	97.85	-88.67	12.000	11.532	-3.880
7,375.00	63.15	276.84	7,156.86	220.29	76.02	-66.74	12.000	11.559	-3.662
7,400.00	66.05	275.97	7,167.58	222.81	53.58	-44.21	12.000	11.581	-3.480
7,425.00	68.95	275.14	7,177.15	225.04	30.59	-21.15	12.000	11.600	-3.327
7,450.00	71.85	274.34	7,185.53	226.98	7.13	2.38	12.000	11.615	-3.199
7,475.00	74.76	273.56	7,192.71	228.63	-16.76	26.31	12.000	11.628	-3.095
7,500.00	77.67	272.81	7,198.67	229.98	-41.00	50.59	12.000	11.638	-3.010
7,525.00	80.58	272.08	7,203.39	231.03	-65.53	75.13	12.000	11.647	-2.944
7,550.00	83.49	271.35	7,206.85	231.77	-90.27	99.89	12.000	11.653	-2.895
7,575.00	86.41	270.64	7,209.05	232.20	-115.17	124.78	12.000	11.657	-2.861
7,600.00	89.32	269.93	7,209.98	232.32	-140.15	149.74	12.000	11.659	-2.843
7,609.99	90.49	269.64	7,210.00	232.29	-150.14	159.72	12.000	11.659	-2.839
Hold: 90.49° Inc, 269.64° Azm									
7,700.00	90.49	269.64	7,209.23	231.72	-240.14	249.63	0.000	0.000	0.000
7,800.00	90.49	269.64	7,208.38	231.10	-340.14	349.51	0.000	0.000	0.000
7,900.00	90.49	269.64	7,207.53	230.48	-440.13	449.39	0.000	0.000	0.000
8,000.00	90.49	269.64	7,206.67	229.85	-540.13	549.27	0.000	0.000	0.000
8,100.00	90.49	269.64	7,205.82	229.23	-640.12	649.15	0.000	0.000	0.000
8,200.00	90.49	269.64	7,204.97	228.60	-740.11	749.03	0.000	0.000	0.000
8,300.00	90.49	269.64	7,204.12	227.98	-840.11	848.91	0.000	0.000	0.000
8,400.00	90.49	269.64	7,203.27	227.36	-940.10	948.79	0.000	0.000	0.000
8,500.00	90.49	269.64	7,202.42	226.73	-1,040.10	1,048.67	0.000	0.000	0.000
8,600.00	90.49	269.64	7,201.56	226.11	-1,140.09	1,148.55	0.000	0.000	0.000
8,700.00	90.49	269.64	7,200.71	225.48	-1,240.09	1,248.43	0.000	0.000	0.000



Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 201H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3384.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 201H	MD Reference:	Well @ 3384.00usft (Est. 20'KB)
Well:	Fadeaway 201H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	90.49	269.64	7,199.86	224.86	-1,340.08	1,348.31	0.000	0.000	0.000
8,900.00	90.49	269.64	7,199.01	224.24	-1,440.08	1,448.20	0.000	0.000	0.000
9,000.00	90.49	269.64	7,198.16	223.61	-1,540.07	1,548.08	0.000	0.000	0.000
9,100.00	90.49	269.64	7,197.31	222.99	-1,640.06	1,647.96	0.000	0.000	0.000
9,200.00	90.49	269.64	7,196.45	222.36	-1,740.06	1,747.84	0.000	0.000	0.000
9,300.00	90.49	269.64	7,195.60	221.74	-1,840.05	1,847.72	0.000	0.000	0.000
9,400.00	90.49	269.64	7,194.75	221.12	-1,940.05	1,947.60	0.000	0.000	0.000
9,500.00	90.49	269.64	7,193.90	220.49	-2,040.04	2,047.48	0.000	0.000	0.000
9,600.00	90.49	269.64	7,193.05	219.87	-2,140.04	2,147.36	0.000	0.000	0.000
9,700.00	90.49	269.64	7,192.20	219.24	-2,240.03	2,247.24	0.000	0.000	0.000
9,800.00	90.49	269.64	7,191.35	218.62	-2,340.02	2,347.12	0.000	0.000	0.000
9,900.00	90.49	269.64	7,190.49	218.00	-2,440.02	2,447.00	0.000	0.000	0.000
10,000.00	90.49	269.64	7,189.64	217.37	-2,540.01	2,546.88	0.000	0.000	0.000
10,100.00	90.49	269.64	7,188.79	216.75	-2,640.01	2,646.76	0.000	0.000	0.000
10,200.00	90.49	269.64	7,187.94	216.12	-2,740.00	2,746.65	0.000	0.000	0.000
10,300.00	90.49	269.64	7,187.09	215.50	-2,840.00	2,846.53	0.000	0.000	0.000
10,400.00	90.49	269.64	7,186.24	214.88	-2,939.99	2,946.41	0.000	0.000	0.000
10,500.00	90.49	269.64	7,185.38	214.25	-3,039.99	3,046.29	0.000	0.000	0.000
10,600.00	90.49	269.64	7,184.53	213.63	-3,139.98	3,146.17	0.000	0.000	0.000
10,700.00	90.49	269.64	7,183.68	213.00	-3,239.97	3,246.05	0.000	0.000	0.000
10,800.00	90.49	269.64	7,182.83	212.38	-3,339.97	3,345.93	0.000	0.000	0.000
10,900.00	90.49	269.64	7,181.98	211.76	-3,439.96	3,445.81	0.000	0.000	0.000
11,000.00	90.49	269.64	7,181.13	211.13	-3,539.96	3,545.69	0.000	0.000	0.000
11,100.00	90.49	269.64	7,180.27	210.51	-3,639.95	3,645.57	0.000	0.000	0.000
11,200.00	90.49	269.64	7,179.42	209.88	-3,739.95	3,745.45	0.000	0.000	0.000
11,300.00	90.49	269.64	7,178.57	209.26	-3,839.94	3,845.33	0.000	0.000	0.000
11,400.00	90.49	269.64	7,177.72	208.64	-3,939.94	3,945.21	0.000	0.000	0.000
11,500.00	90.49	269.64	7,176.87	208.01	-4,039.93	4,045.10	0.000	0.000	0.000
11,600.00	90.49	269.64	7,176.02	207.39	-4,139.92	4,144.98	0.000	0.000	0.000
11,700.00	90.49	269.64	7,175.17	206.76	-4,239.92	4,244.86	0.000	0.000	0.000
11,800.00	90.49	269.64	7,174.31	206.14	-4,339.91	4,344.74	0.000	0.000	0.000
11,900.00	90.49	269.64	7,173.46	205.52	-4,439.91	4,444.62	0.000	0.000	0.000
12,000.00	90.49	269.64	7,172.61	204.89	-4,539.90	4,544.50	0.000	0.000	0.000
12,100.00	90.49	269.64	7,171.76	204.27	-4,639.90	4,644.38	0.000	0.000	0.000
12,200.00	90.49	269.64	7,170.91	203.64	-4,739.89	4,744.26	0.000	0.000	0.000
12,306.52	90.49	269.64	7,170.00	202.98	-4,846.40	4,850.65	0.000	0.000	0.000
TD @ 12306.51' MD/7170.00' TVD									



Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 201H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3384.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 201H	MD Reference:	Well @ 3384.00usft (Est. 20'KB)
Well:	Fadeaway 201H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP - Fadeaway 201H - plan misses target center by 400.40usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	236.21	323.30	589,914.61	585,452.37	32° 37' 17.918 N	104° 11' 24.168 W
LTP - Fadeaway 201H - plan misses target center by 4800.55usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	202.55	-4,796.27	589,880.95	580,332.80	32° 37' 17.649 N	104° 12' 24.031 W
PBHL - Fadeaway 201H - plan hits target center - Point	0.00	0.00	7,170.00	202.98	-4,846.40	589,881.38	580,282.67	32° 37' 17.654 N	104° 12' 24.617 W
FTP - Fadeaway 201H - plan misses target center by 141.68usft at 7275.00usft MD (7103.05 TVD, 207.54 N, 159.12 E) - Point	0.00	0.00	7,210.00	234.55	248.03	589,912.95	585,377.10	32° 37' 17.903 N	104° 11' 25.048 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
640.00	640.00	Tansill		0.00	
790.00	790.00	Yates		0.00	
1,250.00	1,250.00	Seven Rivers		0.00	
1,700.00	1,700.00	Queen		0.00	
2,190.00	2,190.00	Grayburg		0.00	
2,780.00	2,780.00	San Andres		0.00	
3,750.00	3,750.00	Bone Spring Lime		0.00	
6,885.57	6,775.00	FBSG Sand		0.00	
7,370.92	7,155.00	SBSG Sand		0.00	
7,609.42	7,210.00	SBSG Sand Target		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6029	6029	0	0	KOP: 12°/100' @ 6029.17' MD
6448	6397	36	169	Build: 12°/100' @ 6448.34' MD
7610	7210	232	-150	Hold: 90.49° Inc, 269.64° Azm
12,307	7170	203	-4846	TD @ 12306.51' MD/7170.00' TVD

Checked By: _____ Approved By: _____ Date: _____

CASING / CEMENT DESIGN SUMMARY

Estimate only, confirm volumes and cement blends prior to job, adjust as required for hole conditions and changes in well bore construction. Re-calculate all volumes prior to pump.

Surface Casing

Setting Depth

TVD	MD	Length	Size	Weight	Grade	Threads	ID	Drift	Conn OD
700.0 ft	700.0 ft	700.0 ft	13.375 in	48.0 #/ft	H40	STC	12.715 in	12.559 in	14.375 in
- ft	- ft	- ft	- in	- #/ft	-	-	- in	- in	- in
- ft	- ft	- ft	- in	- #/ft	-	-	- in	- in	- in

BURST			COLLAPSE			TENSILE			Optimum Torque
Rated	Load	S.F.	Rated	Load	S.F.	Rated	Load	S.F.	
1,730 psi	466 psi	3.72	740 psi	247 psi	3.0	352,000 lbs	133,600 lbs	2.6	3,220 ft*lbs
- psi	- psi	0.00	- psi	- psi	-	- lbs	100,000 lbs	-	- ft*lbs
- psi	- psi	0.00	- psi	- psi	-	- lbs	100,000 lbs	-	- ft*lbs

Cement to Surf	0 - 700	Lead	0 sx	C+4% Gel+2% CaCl2+1/4 #/sx Cello Flake	Yield	1.75 ft3/sx	
Excess	100%	Lead			Density	13.5 ppg	
	100%	Tail	Tail	750 sx	C+2% CaCl2+1-GAL/100-SX CF-41L	Yield	1.34 ft3/sx
						Density	14.8 ppg

Intermediate Casing

Intermediate casing

Setting Depth										
	TVD	MD	Length	Size	Weight	Grade	Threads	ID	Drift	Conn OD
1	4,000.0 ft	4,000.0 ft	4,000.0 ft	9.625 in	40.0 #/ft	J55	BTC	8.835 in	8.679 in	10.625 in
2	- ft	- ft	- ft	- in	- #/ft	-	-	- in	- in	- in
3	- ft	- ft	- ft	- in	- #/ft	-	-	- in	- in	- in

BURST			COLLAPSE			TENSILE			Optimum Torque	
Rated	Load	S.F.	Rated	Load	S.F.	Rated	Load	S.F.		
1	3,950 psi	1,412 psi	2.80	2,570 psi	1,412 psi	1.8	520,000 lbs	160,000 lbs	3.3	7,270 ft*lbs
2	- psi	1,872 psi	0.00	- psi	- psi	-	- lbs	- lbs	-	- ft*lbs
3	- psi	1,872 psi	0.00	- psi	- psi	-	- lbs	- lbs	-	- ft*lbs

Intermediate	0 - 4000	Lead	740 sx	C 50:50:10+6/10% SMS+1/4 #/sx CF	Yield	2.28 ft3/sx	
3600 - 0	50%	Lead		+5% SALT+1-GAL/100-SX CF-41L	Density	11.9 ppg	
4000 - 3600	50%	Tail	Tail	160 sx	C+1-GAL/100-SX CF-41L	Yield	1.33 ft3/sx
						Density	14.8 ppg

Production Liner

Setting Depth																		
TVD		MD		Length	Size	Weight	Grade	Threads	ID	Drift	Conn OD							
1	6,029.0	ft	6,229.0	ft	6,229.0	ft	7.000	in	29.0	#/ft	HCP110	GBCD	6.276	in	6.151	in	7.656	in
2	7,170.0	ft	6,077.0	ft	6,077.0	ft	5.500	in	17.0	#/ft	HCP110	ME2	4.892	in	4.767	in	6.050	in
3	-	ft	-	ft	-	ft	-	in	-	#/ft	-	-	-	in	-	in	-	in

BURST			COLLAPSE			TENSILE			Optimum Torque								
Rated	Load	S.F.	Rated	Load	S.F.	Rated	Load	S.F.									
1	9,950	psi	3,539	psi	2.81	6,230	psi	2,755	psi	2.26	639,000	lbs	200,038	lbs	3.19	6,930	ft*lbs
2	10,640	psi	4,209	psi	2.53	8,580	psi	3,277	psi	2.62	445,000	lbs	19,397	lbs	22.94	6,470	ft*lbs
3	-	psi	-	psi	0.00	-	psi	-	psi	-	-	lbs	-	lbs	-	-	ft*lbs

Production	3000	-	12306	Lead	430	sx	0	Yield	1.72	ft3/sx
6500 - 3000	40%	Lead					0	Density	13.2	ppg
12306 - 6500	40%	Tail	Tail	1050	sx	Solucem Cement+.25lb/sk D-Air 5000 + .7% HR-601		Yield	1.18	ft3/sx
Preflush	Mud Compatible	Spacer					0	Density	15.6	ppg



API No: <pending>

Permit: <pending>

SHL: 1219 FNL & 332 FEL, Sec 32, T19S R28E, NMPM

Eddy County

BHL: 990 FNL & 50 FWL, Sec 32, T19S R28E, NMPM

Field: Winchester; Bone Spring

NM

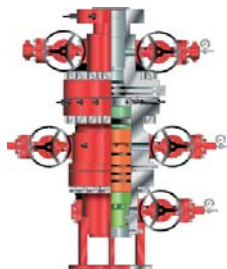
AFE #: 318050-01H

Contractor: <pending>

Date: 9-Jan-20

WELLBORE SCHEMATIC		MD	TVD	Dev deg	SECTION COMMENTS	Survey x:y Coordinates
Hole Size	Formation				Pre-Drill Prognosis	
17 1/2	KB	3,391.0	feet		Daily Reports in by 06:30 Thomas Wolfmueller- 432-253-7742	SHL x: 585129.07
	Ground	3,364.0	feet			y: 589678.40
	Csg Flng	3,362.8	feet			BHL x: 580282.67
						y: 589881.38
12 1/4	Base Ogallala	325			Pre-Set Surface Casing	Planned 5372 ' VS, 4697' lateral
	Ground Water	325			If no inc/azi tool:Gyro Surface Hole	
	Surface Csg	700		0.0	* CEMENT TO SURFACE *	Mud
	Surface Casing	700		700	13.375in, 48.lb, H40, STC	
8 3/4		TOC	0			Lead 0 sx, 13.5 ppg
	Tansill	640	640	0.0		Tail 750 sx, 14.8 ppg
	Yates	790	790	0.0		Drill out with 10# brine
	Seven Rivers	1,250	1,250	0.0		Add 10# brine for make up to
	Queen	1,700	1,700	0.0		
	Grayburg	2,190	2,190	0.0		
	San Andres	2,780	2,780	0.0		MW 10.0
	Intermediate Casing	4,000		4,000	9.625in, 40.lb, J55, BTC	Lead 740 sx, 11.9 ppg
		TOC	0			Tail 160 sx, 14.8 ppg
	Bone Spring lime	3,750	3,676	0.0		Cut Brine
						MW 8.9-9.4
						pH 10-10.5
						Maintain LCM sweeps
	KOP	6,029	6,029	0		
	FBSG Sand	6,885	6,775	13		
	SBSG Sand	7,370	7,155	63		
	2nd BS	7,609	7,210	90.0		MW :9.1-9.2 ppg
	EOB	7,609	7,210	90.5		PV 20
						YP 15
						6/3/76
	Total Depth	12,306	7,170	90.5	Planned 5372 ' VS, 4697' lateral	
	Production Casing	12,306		6,229	7.in, 29.lb, HCP110, GBCD	Lead 430 sx, 13.2 ppg
		TOC	3,000	6,077	5.5in, 17.lb, HCP110, ME2	Tail 1050 sx, 15.6 ppg

Wellhead Data



Multibowl
Tubing Spool
13-5/8"5M x 7-1/16" 10M
Multi Bowl
13-5/8"5M x 13-5/8"5M
x 10 3/4"x 7 5/8"x 51/2"
Casing Flange
13-5/8"5Mx13-3/8 SOW

Primary Contacts

Phone

Drilling
Drilling Fluids
Casing
Directional
Cement (Surf)
Cement (Prod)
Rental - Centrifuges
Mud Logging
Wellhead

Directions

From the intersection 285 and N Loop Rd (north of Carlsbad). Go East on N Loop Rd for 3.25 miles to 206(Illinois Camp Rd). Go north on 206 for 12 miles. Turn right and go 2.17 miles. Turn right to rig.

Lat: 32.62099584

Lon: 104.2